#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-016757 Address: 333 Burma Road **Date Inspected:** 11-Sep-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Mr. Huang min No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** Orthotropic Box Girder (OBG)

#### **Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

#### BAY-6

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06644.

Magnetic Particle Testing (MT)

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated MT report for this date. The members are identified as OBG Deck and Side Plate weld Components. Total number of welds MT Tested: 39 No's. The weld designations are review as follows:

- 1. DP3181-001-001~014
- 2. DP3180-001-001~006,028,029
- 3. SP3121A-001-002,017,019,032~041,068,100,108,110.

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Signed off the following green tags:

- 1.14671
- 2.14670
- 3.14543

This QA Inspector Randomly observed the following work in progress:

Shielded Metal Arc Welding (SMAW) of weld joint WJF-0-136. Welder is identified as 054467. ZPMC Quality Control (QC) is identified as Mr. Huang min. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-3311-TC-P4.

SMAW of weld joint WJF-0-146. Welder is identified as 053742. ZPMC Quality Control (QC) is identified as Mr. Huang min. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-3311-TC-P4.

SMAW of weld joint WJF-0-155. Welder is identified as 215083. ZPMC Quality Control (QC) is identified as Mr. Huang min. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-3311-TC-P4.

During the Caltrans QA in-process observations of the fabrication of West Jacking Frame (WJF) WJF-0, this QA observed ZPMC personnel heat straightening A709-HPS-485W (TTP) material after completion of all Non Destructive Testing (NDT). The plate is identified as WJF-14, Non-Seismic Performance Critical Material (Non-SPCM). The affected welds are identified as: WJF-0-357,358,360,361,363,364,367,368,370,371,373,374,377, 378,468~471. Due to the fabrication sequence, some welds are no longer accessible for NDT. The heat straightening was being performed as per ZPMC HSR identified as HSR1 (B)-9335. The Material thickness is 25 mm.

This QA generated an incident report on this date for the above issue, for further information see the incident report and attached photos.

BAY-7

Flux Cored Arc Welding (FCAW) of weld joint SA3077-001-001. Welder is identified as 204342. ZPMC Quality Control (QC) is identified as Mr. Goupan. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2331-C-P2-F-2.

FCAW of weld joint SA3078-005-001. Welder is identified as 053609. ZPMC Quality Control (QC) is identified as Mr. Xu Hai Yang. The welding variables appeared to comply with the Applicable WPS: WPS-B-T-2333-C-P2-F.

FCAW of weld joint W2-SB1-008-126~131. Welder is identified as 048625. ZPMC Quality Control (QC) is identified as Mr. Cui Jun Jie. The welding variables appeared to comply with the Applicable WPS: WPS-B-T-2132-3.

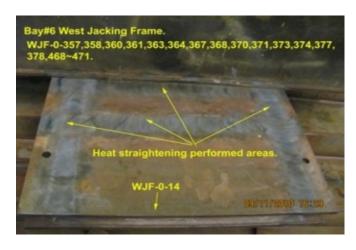
FCAW of weld joint W2-SB1G-004-126~131. Welder is identified as 053742. ZPMC Quality Control (QC) is

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identified as Mr. Cui Jun Jie. The welding variables appeared to comply with the Applicable WPS: WPS-B-T-2132-3.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

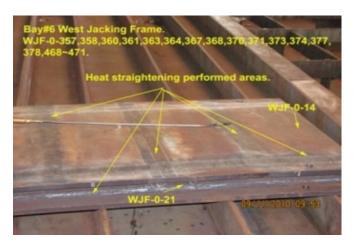












## **Summary of Conversations:**

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Only general conversation was held between QA and Quality Control (QC) concerning this project.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

<b>Inspected By:</b>	Prabhu,Surendra	Quality Assurance Inspector
Reviewed By:	Hall,Steven	QA Reviewer